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MISCELLANEOUS PUBLICATION 27

DISEASES OF THE OPIUM POPPY
(PAPAVR SOMNIFERUM):
A CHECK LIST (U)

William C. Harrison
Chris G. Schmitt

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William C. Harrison

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(U) FOREWORD

(U) This check list of diseases of Papaver somniferum L., the opium poppy, was compiled from files made available by Dr. Paul Miller of the Epiphytology Section of the Agricultural Research Service and from literature available in the National Agricultural Library.

(U) The opium poppy is commonly cultivated in Europe and numerous other areas for its seed and narcotic products. It is found infrequently in licensed plantings in this country; because little of the crop is cultivated here, the literature on diseases of this host are mainly of foreign origin.

(U) ABSTRACT

(U) This check list of diseases of Papaver somniferum L., the opium poppy, includes two bacterial, two viral, and more than 50 fungal diseases. Five species of nematodes that have been reported on poppy roots also are included.

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CONTENTS

Foreword	2
PREFACE	2
I. BACTERIA	5
II. FUNGI	5
III. VIRUSES	8
IV. NEMATODES	9
Literature Cited	11
Author Index	19
Distribution List	21

1. (U) BACTERIA

Erwinia carotovora (Townsend) Holland. Soft rot (shoots and stems). Japan.¹

Syn. Bacterium papaveris (Ayyar) Burgwitz.

Erwinia papaveris (Ayyar) Magrou.

Xanthomonas papavericola (Br. & McWhorter) Dowson. Bacterial leaf blight.
USA, Bulgaria.²

Syn. Bacterium papavericola Br. & McWhorter.

II. (U) FUNGI

Alternaria brassicae (Berk.) Sacc. var. senniferi Br. & Har. Leaf spot
(on capsules). Bulgaria,^{3,5} Germany,⁶ USSR,⁷ India,⁸ Japan.⁹

Syn. Alternaria papaveris Sawada.

Alternaria senniferi Br. and Har.

Alternaria brunnea Sawada. Leaf spot (on flowers and capsules). Formosa.¹⁰

Alternaria Nees ex Wallr. sp. Leaf spot. Italy,¹¹ Palestine.¹²

Acremonium rostriforme ? (= Phragmidium Link sp., perfect stage). Rust.
India.¹³

Ascochyta Lib. sp. Leaf spot. USSR.¹⁴

Cercospora papavericola Chupp. Leaf spot. Formosa.¹⁰

Cladosporium herbarum (Pers.) Fr. [= Mycosphaerella tulasnei (Jancz.)
Lindau, perfect stage]. Leaf spot. Bulgaria,^{3,5} India,¹³ USSR.¹⁵

Corticium solani (Prill. & Delacr.) Bourd. & Galz. See Phizoctonia solani.

Dactynopces papaveris Quel. India.⁸

Dactylium roseum ? [= Hymenopces (Fr.) Tul. sp., perfect stage]. Leaf spot.
India.¹⁵

Dendryphium papaveris Sawada. Leaf spot. Formosa.¹⁰

Uromyces pteridifolius (Cda.) Fr. (= Uromyces pteridifolius (Fr.)
Cda.) Leaf spot. Germany, Netherlands,¹⁰
Czechoslovakia,¹¹ Switzerland.¹⁸

Uromyces pteridifolius (Cda.) Fr. var. subglobosus Meffert. Leaf spot.
Germany.¹⁷

Uromyces pteridifolius Schroet. Leaf smut. Germany,⁶ India,⁶ Rumania,²⁰
Germany,¹¹ Cyprus,¹¹ Turkey,¹¹ Yugoslavia,¹¹ Argentina,²⁶
Pitcairnia (British).²⁷

Uromyces pteridifolius de Bary sp. Leaf smut. Italy.²⁸

Uromyces pteridifolius Cda. Leaf spot (dots). India.⁸

Uromyces pteridifolius DC. Powdery mildew. India,²⁹ USSR,^{30, 31} Formosa.³²

Uromyces pteridifolius (Wallr.) Link. Powdery mildew. Finland,³³ USSR.³⁴

Uromyces pteridifolius DC. Powdery mildew. USA,² Germany,⁶ India,²⁹
Argentina,^{35, 36} Switzerland.³⁷

Uromyces pteridifolius Sawada. Powdery mildew. Formosa.³⁸

Uromyces pteridifolius Lamb. & Fautr. var. caudatum Wr. Spots. Bulgaria.^{4, 39}

Uromyces pteridifolius Link ex Fr. sp. Spots. Bulgaria,⁴ Palestine.¹²

Uromyces pteridifolius Desm. & Mont. sp. Spots. Japan.⁴⁰

Uromyces pteridifolius panaveris Sawada. [= Pleospora calvescens (Fr.) Tul.,
perfect stage]. Damping off. India,⁶ Germany,⁴¹ Poland,⁴¹ Bulgaria,^{4, 41, 42}
Denmark,⁴³ Formosa,⁴⁴ France,⁴⁵ Japan,^{44, 46} USSR,⁴⁷ Yugoslavia,^{48, 49}
Czechoslovakia,⁵⁰ Switzerland,⁵¹ Austria.⁵²

See also Pleospora calvescens for synonyms.

Uromyces pteridifolius Link ex Fr. sp. Leaf spot. Palestine.¹²

Uromyces pteridifolius echinulatum (Berk.) Cke. (= Didymella dianthi Burt., perfect
stage). Spots. Rare. Bulgaria.⁴

Uromyces pteridifolius groenlandicum Allesch. Spots. USSR.^{34, 53}

Uromyces pteridifolius panaveris Da Camara. Leaf spot. Portugal.⁵⁴

Macrosporium bresadolae Parisi. Leaf spot. Bulgaria,⁴ Italy,^{55,56} Germany,⁵⁷ Japan,^{58,59} USSR.⁵⁹

Syn. Macrosporium papaveris Brev.

Macrosporium sonniferi Garbowski.

Macrosporium Fr. sp. Leaf spot. Italy.¹¹

Macor macedo (L.) Link. Mold. Rare. Bulgaria,⁴ India.¹³

Mycothiaerella tulasnei (Jancz.) Lindau. See Cladosporium herbarum.

Oidium erysiphoides Fr. Imperfect powdery mildew. USSR.^{34,60}

Ophiobolus sativus (P. & K.B.) Ito & Kuribayashi. Rot disease. Bulgaria.⁴

Pellicularia filamentosa (Pat.) Rogers. See Rhizoctonia solani.

Syn. Corticium solani (Prill. & Delacr.) Bourd. & Calz.

Corticium vagum B. & C. var. solani Burt.

Penicillium Link ex Fr. sp. Common mold. Rare. Bulgaria.⁴

Peronospora arborescens L. Downy mildew. India,^{8,13,29,61}
Czechoslovakia,^{17,61} Switzerland,^{7,61} Denmark,⁶¹ Finland,⁶¹ France,⁶¹
Hungary,⁶¹ Iran,⁶¹ Italy,⁶¹ Norway,⁶¹ Poland,⁶¹ Sweden,⁶¹ Argentina,^{61,62}
Austria,^{61,63} Bulgaria,^{4,64} China,⁶⁵ Egypt,^{61,64,66} England,^{61,67,68}
Ireland,⁶⁸ Germany,^{6,61,69,70} Japan,^{46,61,71,72} Macedonia,⁷³
Netherlands,^{61,74,75} Romania,^{61,76,77} Scotland,^{68,78} Spain,⁷⁹
Uruguay,^{80,81} USSR,^{61,82-86} Yugoslavia.⁸⁷⁻⁸⁹

Phelisia indica ? India.¹³

Phoma melaena (Fr.) M. & D. Blight. India,⁸ Hungary.⁹⁰

Phoma morphaea Sacc. Blight. India,⁸ Italy.⁹¹

Phoma striaeformis D. & M. var. hysteriola Sacc. Blight. India,⁸ Italy,⁹² France.⁹³

Pleospora calvescens (Fr.) Tul. See Helminthosporium papaveris.

Syn. Pleospora papaveracea (De Not) Sacc.

Pleospora pellita (Fr.) Rabh.

Phoma uliginosa Messl. Leaf spot. India.⁸

Pellicularia uliginosa (Fr.) Sacc. See Dothiorella pterostictum.

Dothiorella pterosticta (Fr.) Sacc. Leaf spot. India,⁸ Switzerland.⁵¹

Phoma uliginosa Frow. Seedling blight. Australia.⁹⁴

Phoma uliginosa Kuehn [= Pellicularia filamentosae (Pat.) Rogers, perfect stage] Damping off. USA,⁹⁵ India.^{96,97} See Pellicularia filamentosae for synonyms.

Rhizoctonia DC ex Fr. sp. Damping off. India.⁹⁸

Rhizomorpha Roth ex Fr. sp. India.¹³

Rhizopus Ehrenb. ex Corda sp. Rot. Rare. Bulgaria.⁴

Sclerotinia libertiana Fuckel. See Sclerotinia sclerotiorum.

Sclerotinia sclerotiorum (Lib.) de Bary. Blight. USSR.⁹⁷

Syn. Sclerotinia libertiana Fuckel.

Sclerotinia Fuckel sp. Blight. Rare. Bulgaria.⁴

Sclerotium rolfsii Sacc. [= Pellicularia rolfsii (Curzi) West, perfect stage]. Crown rot. India.²⁹

Sphaerella morphaea Sacc. Leaf spot. India.⁸

Sporotrichum Link ex Fr. sp. Leaf spot. India.¹³

Stachylidium Link ex Fr. sp. Leaf spot. Italy.¹¹

Trichoderma viride Pers. ex Gray. Mold rot. India.¹³

Trichothecium roseum Link ex Fr. Fruit rot. Rare. Bulgaria.⁴

Trichothecium Link ex Fr. sp. Fruit rot. Italy.¹¹

III. (U) VIRUSES

Cabbage black ringspot virus. England,⁹⁸ South Africa.⁹⁹

Leaf curl virus. ? India.¹⁸

IV. (2) NEMATODES

Helicotylenchus (Gerrard) Goodey. See Meloidichneumon sp.

Helicotylenchus (Gerrard) Schmidt. Sugar beet nematode. Germany.⁶

Meloidichneumon (Gerrard) sp. Root-knot nematodes. USA,² Palestine,¹² Israel.¹³

Syn. Helicotylenchus (Gerrard) Goodey.

Pratylenchus (Gerrard) Cobb. Filipjev. & Stekheven. Meadow nematode. Netherlands.¹⁰¹

Syn. Tylenchus penetrans Cobb.

Pratylenchus Filipjev. sp. Meadow nematode. Netherlands.¹⁰¹

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14

ALPHABETICALLY

A			
Alkirev, A.	53*	Alzhibay, Z.	16*
Angell, H.R.	94*	Arshink, V.	21*
Aschana, S.H.	13*	Chudavchen, A.	61*
B		H	
Barbacka, K.	41*	Hallin, E.M.G.	98*
Becker, A.F.H.	101*	Hausen-Merck, L.	35*, 36*
Bisby, C.R.	29	Helm, I.	40*
Bosaso, C.	80	Hennings, P.	72*
Bondarzew, A.S.	82*	Bruby, J.	70*
Bottenley, A.M.	99	I	
Bremer, H.	24*	Ishiyama, T.	46*, 58*
Bresadola, G.	57*, 90*	Ismen, H.	24
Britten-Jones, H.R.	64*	J	
Brunaud, P.	93*	Jaap, O.	69*
Brundza, K.	14*, 30*	K	
Butler, E.J.	8*, 29*, 96*	Kalymbetov, B.K.	97*
C		Kamat, M.N.	95
Christoff, A.	3*, 4*, 39*, 42*	Karel, G.	24
Ciferri, R.	28*	Keissler, C.	52*
Cotton, A.D.	68*	Kispatic, J.	48*
Cruchet, D.	51*	Koch de Erotoe, L.	80*
D		Kvashnina, E.S.	50*
Da Camara, E.	54*	L	
Dennis, R.W.G.	78*	Lindquist, J.C.	62*
Debrevoleski, M.E.	85*	Lindtner, V.	25*
Doidge, E.M.	99*	Lohik, A.I.	83*
Ducos, P.	45*	Losa Espana, D.M.	79*
F		M	
Fekin, A.D.	15*	Marchionatta, J.B.	26*
Feister, C.E.	78	Matsumura, J.	71*
G		Mayer, E.	37*
Garbowski, M.L.	59*	Meffert, M.E.	29*
Gaumann, E.	67*	Nelchers, L.E.	66*
Georgiou, C.P.	23*		

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Milatovic, I. 49*
 Minz, C. 109*
 Mouton-Goussin, A. 81*

N

Nascentoff, M.N. 84*

O

Oescu, C.V. 76*
 Oelsen-brinke, J.E. 43*
 Oostenbrink, M. 101
 Oulmans, C.A.J.A. 74*
 Ozkan, H. 24
 Ozkan, M. 24

P

Papadopoulos, Chr. 23
 Parisi, R. 55*, 56*
 Parodi, R. 36
 Patel, M.K. 93
 Pauw, G.D. 99
 Petras, P. 22*, 47*
 Petri, L. 11*
 Poeteren, N., van 16*, 75*
 Potebnia, A. 34*
 Prochaska, M. 63*

R

Radulescu, I.M. 76
 Ranojevic, N. 73*
 Rauhala, A. 33*
 Reichert, I. 12*

S

Saccardo, P.A. 91*, 92*
 Savoff, Chr. 5*
 Savulescu, Tr. 20*, 77*
 Savada, K. 9*, 10*, 32*, 38*
 Seda, A. 17*
 Skoric, V. 89*
 Smarods, J. 7*

T

Tai, F.L. 65*
 Takamoto, S. 1*
 Tanaka, T. 44*

U

Uppal, B.N. 95*

V

van der Plank, J.E. 99
 von Kirchner, O. 6*

W

Waterston, J.M. 27*
 Weese, J. 50*

Y

Yossifovtch, M. 87*, 88*

Z

Zaprometoff, N.G. 31*
 Zogg, B. 18*

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10. ABSTRACT (U) This check list of diseases of <u>Papaver somniferum</u> L., the opium poppy, includes two bacterial, two viral, and more than 50 fungal diseases. Five species of nematodes that have been reported on poppy roots also are included.		
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